UNITED STATES SPECIAL OPERATIONS COMMAND

Proposal Submission

The United States Special Operations Command's (USSOCOM) missions include developing and acquiring unique special operations forces (SOF) equipment, material, supplies and services. Desired SOF operational characteristics for systems, equipments and supplies include: lightweight and micro-sized; reduced signature and low observable; built-in survivability; modular, rugged, reliable, maintainable and simplistic; operable in extreme temperature environments; water depth and atmosphere pressure proof; transportable by aircraft, ship and submarine, and deployable by airdrop; LPI/LPD jam resistant C3I, electronic warfare capable of disruption and deception; near real-time surveillance, intelligence and mission planning; highly lethal and destructive; low energy/power requirements; and compatible with conventional force systems. USSOCOM is therefore seeking small businesses with a strong research and development capability and understanding of the necessity for consideration of these SOF operational characteristics for systems. The topics on the following pages represent an introduction to a portion of the problems encountered by the SOF in fulfilling its mission.

USSOCOM invites the small business community to send its proposals directly to the following address:

United States Special Operations Command
Attn: SOKS/SBIR Program, Topic No. SOCOM95-00__
2408 Florida Keys Avenue
MacDill Air Force Base, Florida 33621-5316

The proposals will be distributed to the appropriate technical office(s) for evaluation. Inquiries of a general nature or questions concerning the administration of the SBIR program and proposal preparation should be addressed to:

United States Special Operations Command
Attn: Ms. Paulette Widmann
2408 Florida Keys Avenue
MacDill Air Force Base, Florida 33621-5316
Telephone: (813) 840-5443

The USSOCOM has identified four technical topics for this, the first of two SBIR solicitations to be released during FY 95 by DOD, to which small businesses may respond. The topics listed are the only topics for which proposals will be accepted. The topics were initiated by USSOCOM technical offices that manage the research and development in these areas. No direct communication with the topic author is possible. No additional technical information is available during the solicitation period. The only source for technical information is the Defense Technical Information Center (DTIC). Please refer to Section 7.1 in this solicitation for further information on DTIC.

Firms are encouraged to submit a proposal for an option task which would be performed during the period between Phase I completion and Phase II contract award. The optional task provides the opportunity to reduce the gap between Phase I and II. The maximum amount of SBIR funding used for any USSOCOM Phase I award is $100,000. Proposals that include the option task shall not exceed $70,000 for Phase I and $30,000 for Phase I Option. Any option proposal must be submitted at the same time and place as the basic Phase I proposal and not be included in the basic Phase I proposal page limitation. The basic Phase I proposal shall be evaluated exclusive of the option task and must be proposed and priced separately. The option portion of the proposal shall not exceed 10 pages, not exceed $30,000, not exceed three months in duration, and be evaluated using the same evaluation criteria as Phase I proposals. The transition option work shall be included as an option in the Phase I contract and evaluated for USSOCOM unilateral exercise at any time after Phase I award through the conclusion of the basic Phase I contract. Exercise of any option shall be at the sole discretion of USSOCOM and shall not obligate USSOCOM to make a Phase II award.

Selection of proposals for funding is based upon technical merit and the evaluation criteria included in this solicitation. As funding is limited, USSOCOM reserves the right to select and fund only those proposals considered to be superior in overall technical quality and most critical. As a result, USSOCOM may fund more than one proposal in a specific topic area if the technical quality of the proposals is deemed superior, or it may fund no proposals in a topic area.

US SPECIAL OPERATIONS COMMAND
FY 95.1 SBIR TOPIC INDEX

MATERIALS

MARINE SYSTEMS

PROPULSION and VEHICULAR SYSTEMS

SUBJECT/WORD INDEX TO THE U.S. SOCOM TOPICS

U.S. SOCOM FY95.1 TOPICS

SOCOM 95-001 TITLE: Acoustic and Magnetic Signature Reduction for Outboard Engines

CATEGORY: Advanced Development; Materials

OBJECTIVES: To develop an advanced prototype of a standard, inventoried 55 hp outboard engine that has a greatly decreased magnetic and acoustic signature, and an increased hp to weight ratio.

DESCRIPTION: Influence mines are becoming more sensitive and the risk to operators in mined environments is increased because of the signatures of the outboard engines. This task will develop a cost-effective configuration of a standard outboard engine that has the lowest practical acoustic and magnetic signature.

Phase I: To determine the major magnetic signature components in outboard engines, and to rebuild undesirable parts using non-magnetic or low magnetic materials.

Phase II: To test and evaluate the configurations of low magnetic parts to determine the best arrangement for greatest reduction in acoustic signature and accompanying magnetic signature.

COMMERCIAL POTENTIAL: An advance in noise reduction for outboard engines; a much lighter engine with a much higher power to weight ratio.

SOCOM 95-002 TITLE: Maritime Platform Signature Reduction System

CATEGORY: Engineering Development; Marine Systems

OBJECTIVE: To develop a system to reduce the magnetic, infrared, radar, and acoustic signatures of maritime platforms.

DESCRIPTION: With the proliferation of shore radars, infrared imagers, and night vision devices, Naval Special Warfare forces require reduced signature platforms. A field modification kit is necessary to reduce the signatures of existing platforms.

Phase I: Assess the different signature reduction techniques and fabricate one prototype for testing. Conduct preliminary laboratory testing.

Phase II: Refine the design, fabricate and test under tactical field conditions. Provide estimated cost for production of field modification kits for the different platforms.

COMMERCIAL POTENTIAL: Use by law enforcement personnel in maritime drug interdiction activities.

SOCOM 95-003 TITLE: Low Signature Propulsion System

CATEGORY: Exploratory Development; Propulsion and Vehicular Systems

OBJECTIVES: To develop a low magnetic and acoustic signature propulsion system for Naval Special Warfare (NSW) underwater platforms.

DESCRIPTION: Design and fabricate a low magnetic and low acoustic signature propulsion system for use in a minefield environment. Emphasis should be on a small and lightweight alternative to the traditional electric motor, which creates an undesirable magnetic field. A need exists to create a powerplant suitable for use on Diver Propulsion Vehicles (DPVs) as well as larger underwater platforms. Primary emphasis should be on designing, prototyping, and demonstrating a DPV propulsion system for use by NSW forces.

Phase I: Analyze the specific design restrictions and expand on their propulsion concept showing specifically the power output and signature anticipated.

Phase II: Fabricate and demonstrate a prototype that demonstrates the Phase I concept.

COMMERCIAL POTENTIAL: Sport diving market if the technology is low cost and allows a magnetic compass to be mounted on a DPV without affecting its performance.

SOCOM 95-004 TITLE: Supercharged Diesel Non-Gasoline Burning Outboard Engine

CATEGORY: Engineering Development; Propulsion and Vehicular Systems

OBJECTIVE: To develop a diesel outboard engine that has an effective hp to weight ratio.

DESCRIPTION: Special warfare forces are required to depend upon many different platforms for deployment. These include submarines, small boats, and airplanes. There is a great need to remove volatile gasoline fuel from these platforms and replace it with diesel fuel.

Phase I: To determine the availability of supercharging technology and the accessibility of evaluating non-developmental diesel engines, to develop a working prototype.

Phase II: Based on the results of the prototype testing, select or design a diesel engine configuration acceptable to Special Forces and platform sponsors.

COMMERCIAL POTENTIAL: A diesel outboard engine with improved hp to weight ratio.